

FIG. 1

00000000 00000000

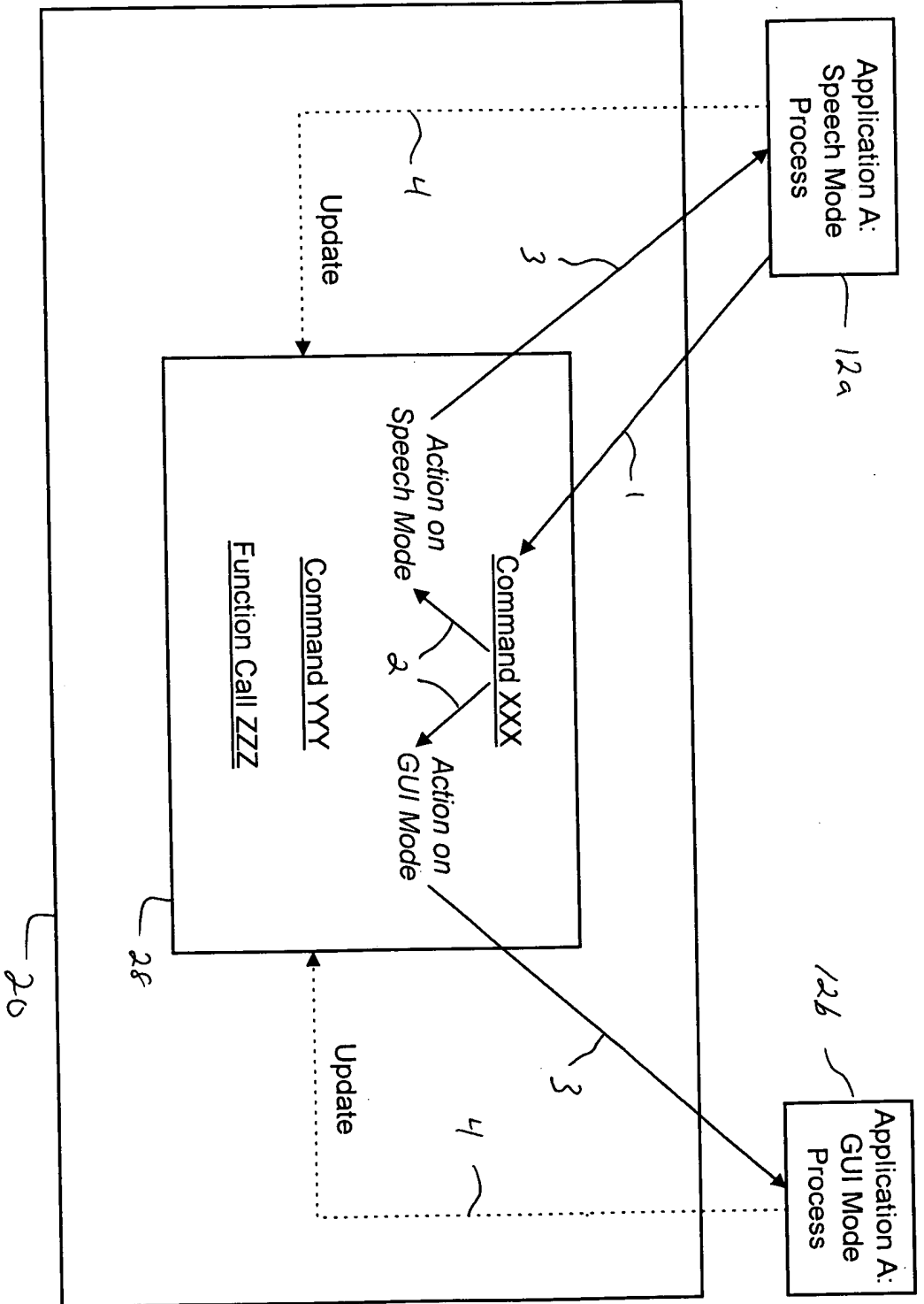


FIG. 2

[illegible]

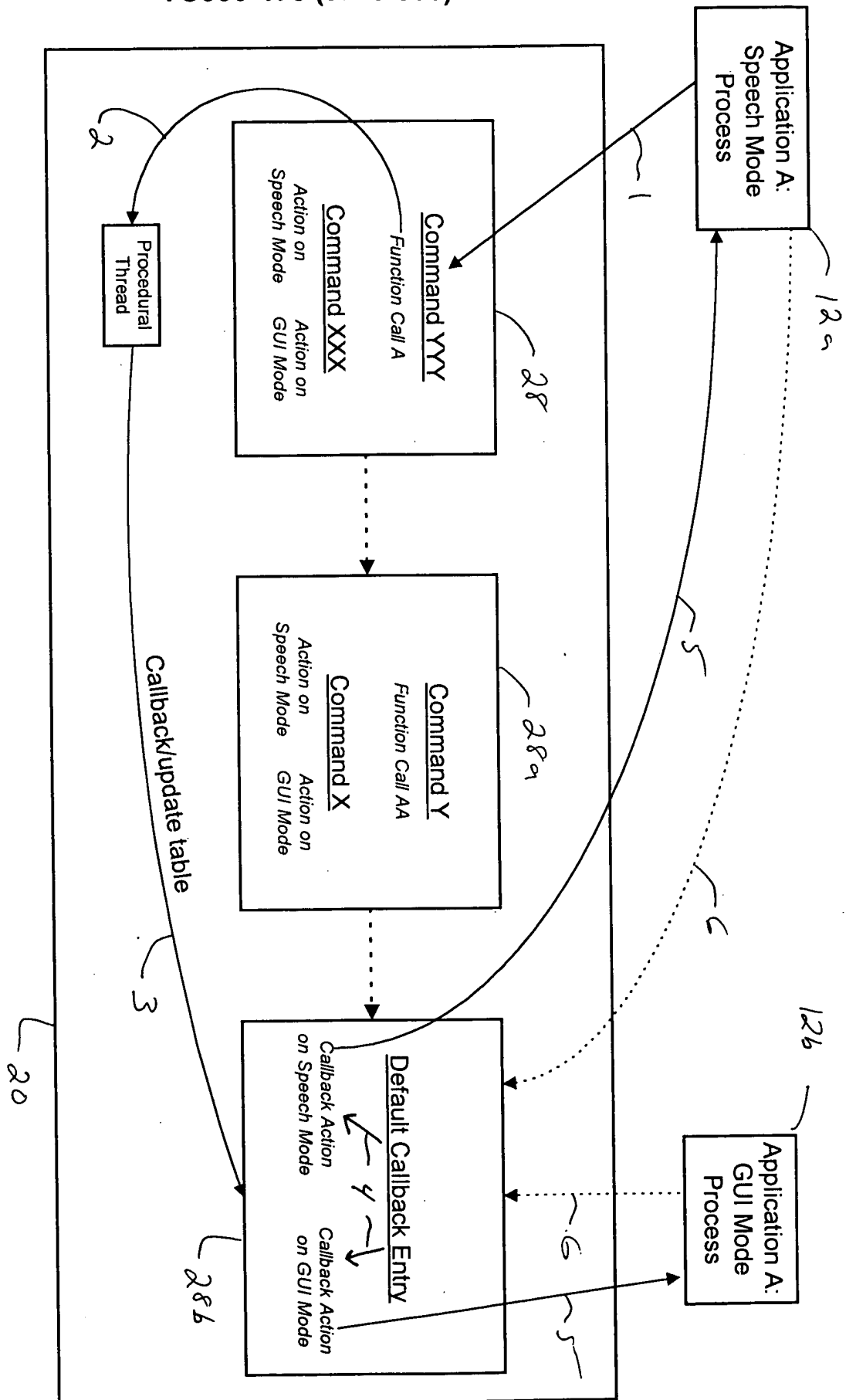
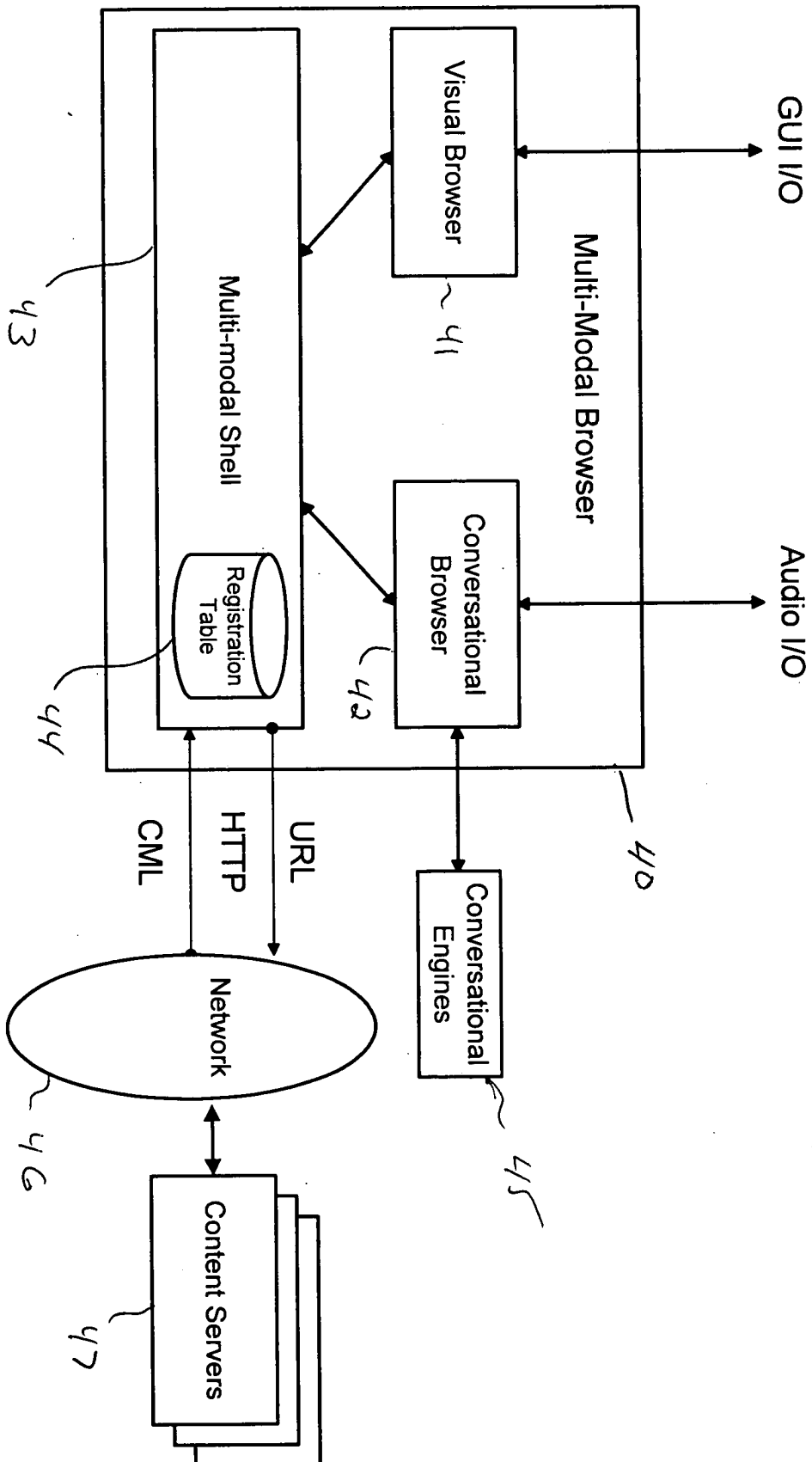


FIG. 3

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



Multi-modal Browser: CML structure

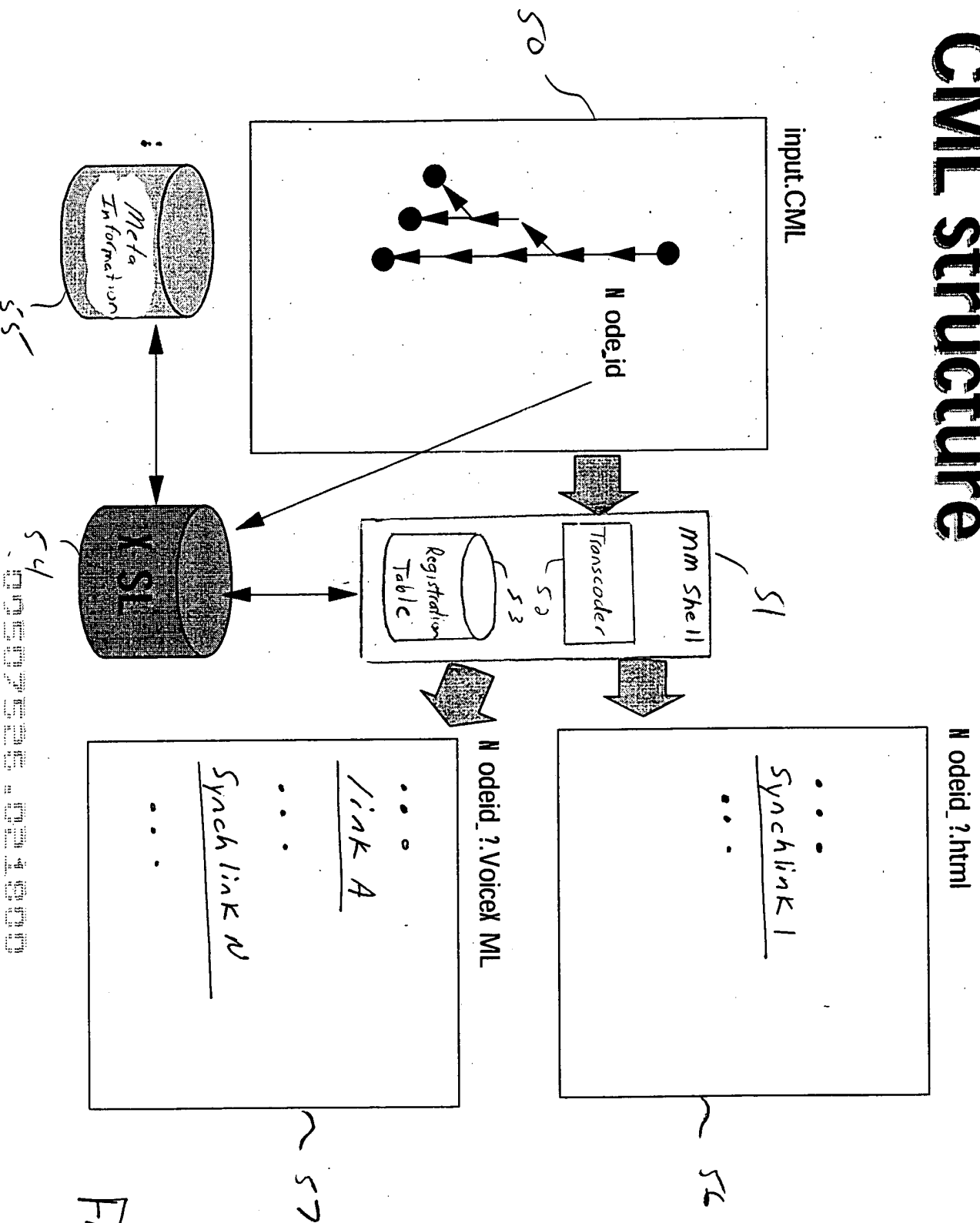
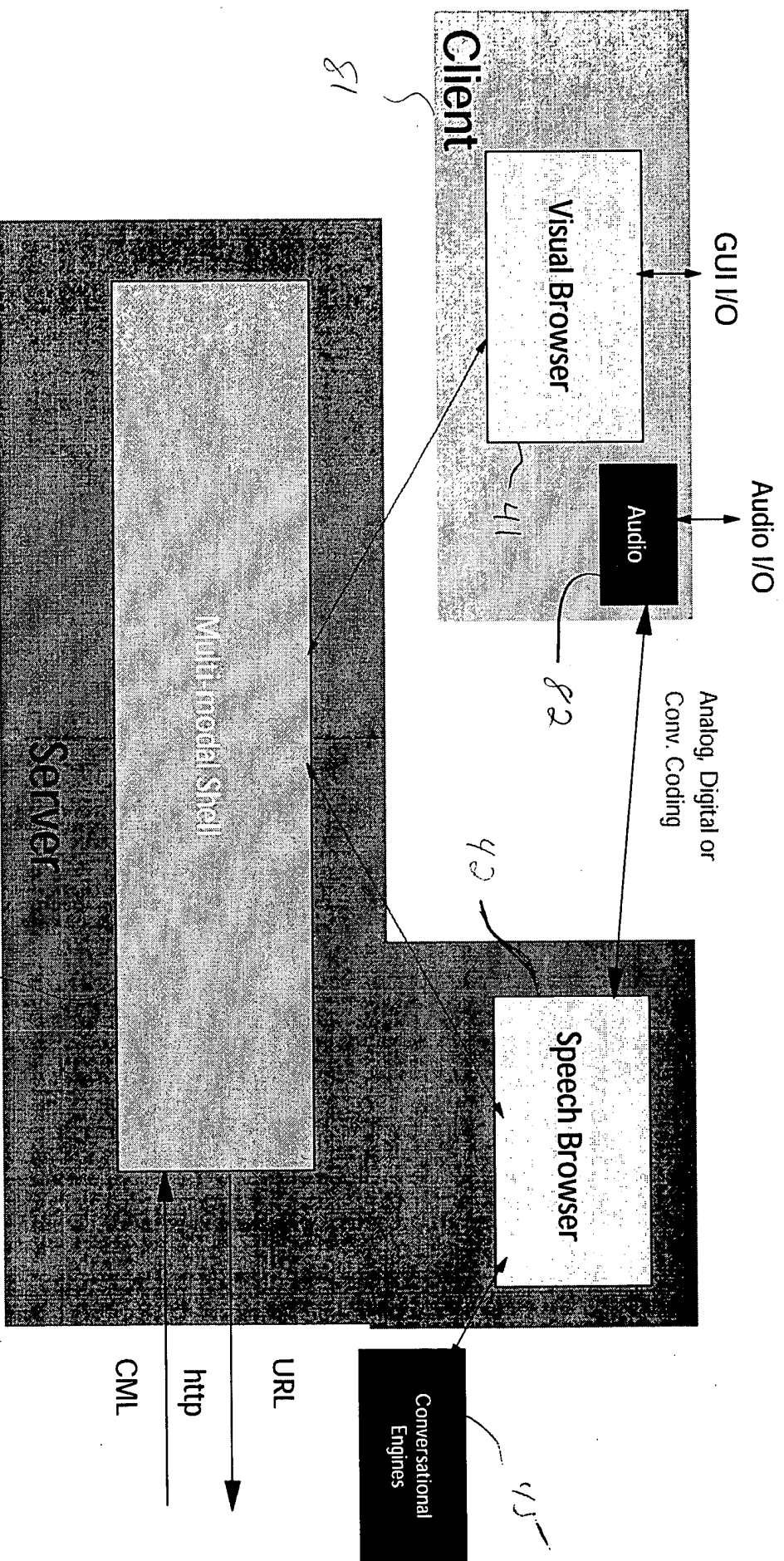


Fig 5

Multi-modal Browser: Architectures (2)



IBM CONFIDENTIAL

Fig 6

00607525 024000

The diagram illustrates a system architecture for a multi-modal shell. It is divided into two main sections: **Client** and **Server**.

Client Section:

- GUI I/O** and **Audio I/O** are input/output interfaces.
- Visual Browser** and **Audio** are components that interact with the I/O interfaces.
- A bracket labeled **41** groups the **Visual Browser** and **Audio** components.
- The **Multi-modal Shell** is a central component that receives input from the **Visual Browser** and **Audio** components.

Server Section:

- Speech Browser** is a component that interacts with the **Multi-modal Shell** and **Conversational Engines**.
- A bracket labeled **42** groups the **Speech Browser** and **Conversational Engines** components.
- Conversational Engines** are components that interact with the **Speech Browser**.

Data Flow:

- Arrows indicate the flow of data between components.
- Arrows labeled **URL** and **CML** point from the **Multi-modal Shell** to the **Speech Browser**.
- An arrow labeled **43** points from the **Multi-modal Shell** to the **Speech Browser**.
- An arrow labeled **44** points from the **Speech Browser** to the **Multi-modal Shell**.
- An arrow labeled **45** points from the **Conversational Engines** to the **Speech Browser**.

Fig 7

Multi-modal Browser: Architectures (4)

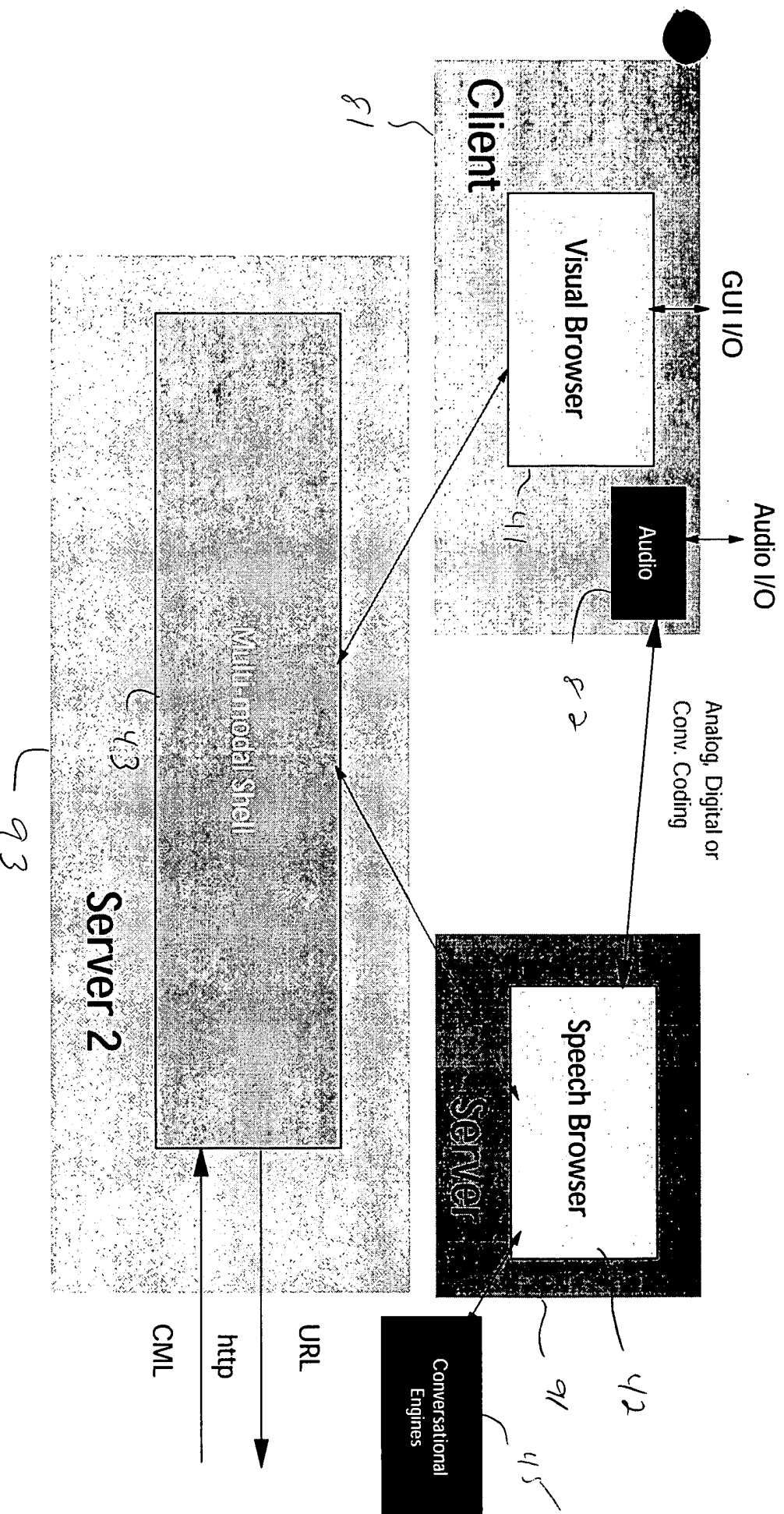


Fig 8

IBM CONFIDENTIAL

00607526 034800

Multi-modal Browser - Legacy browsers

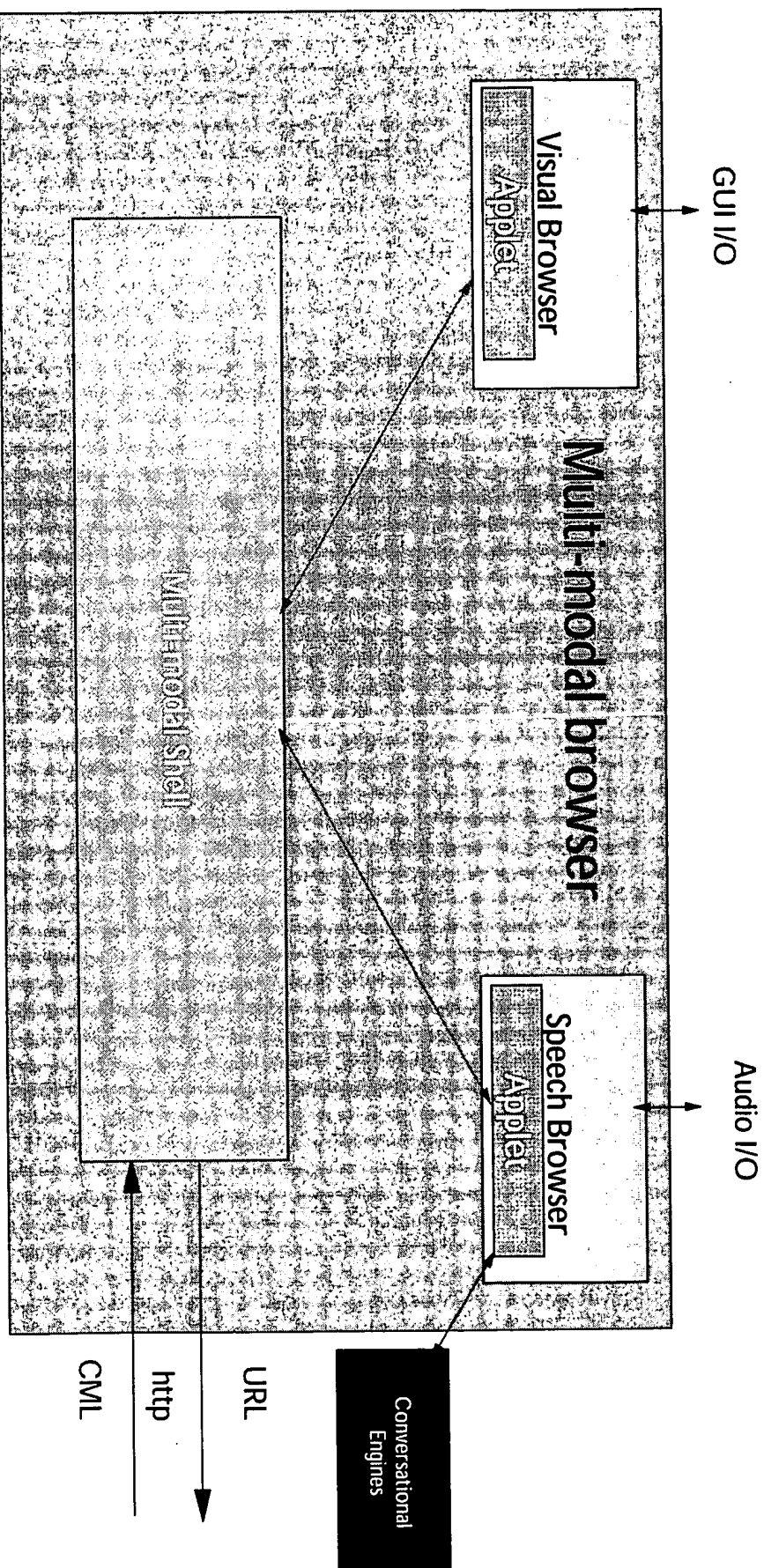


Fig 7

IBM CONFIDENTIAL

03607525.021000